

FORM PTO-1449
(Rev. 2-32)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
99A209SERIAL NO.
09/583,599INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

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APPLICANT

WANG et al.

FILING DATE

May 31, 2000

GROUP

Not Yet Known

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
t	1.	3 267 010	8/66	Creutz et al.			
	2.	3 328 273	6/67	Creutz et al.			
	3.	3 715 289	2/73	Cope, Jr.			
	4.	4 038 161	7/77	Eckles et al.			
	5.	4 134 803	1/79	Eckles et al.			
	6.	4 324 623	4/82	Schaer			
↓	7.	4 376 685	3/83	Watson			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

t	8.		"Copper Electroplating for Advanced Interconnect Technology", R.D. Mikkola, Q.-T. Jiang & B. Carpenter, PLATING & SURFACE FINISHING, March 2000, pp. 81-85
↓	9.		"Leveling of 200 nm Features by Organic Additives", James J. Kelly and Alan C. West, ELECTROCHEMICAL AND SOLID-STATE LETTERS, 2 (11) (1999), LETTERS ONLINE, Kell1-Kell3
EXAMINER	Thao Tran	DATE CONSIDERED	9/21/01

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609;
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tl	10.	4 430 173	2/84	Boudot et al.			
	11.	4 490 220	12/84	Houman			
	12.	4 555 315	11/85	Barbieri et al.			
	13.	4 897 165	1/90	Bernards et al.			
	14.	4 954 226	9/90	Mahmoud			
	15.	4 717 439	1/88	Hajdu et al.			
	16.	4 786 746	11/88	Miljkovic			
✓	17.	4 948 474	8/90	Miljkovic			

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							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

tt	18.		"Polyethylene Glycol in Copper Electrodeposition onto a Rotating Disk Electrode", M.R.H. Hill and G.T. Rogers, J. ELECTROANAL. CHEM., 86 (1978) 179-188
↓	19.		"Studies of Copper Deposition for High Aspect Ratio Printed Circuit Boards", M. Goodenough and K.J. Whitlaw, M. Goodenough and K.J. Whitlaw Trans. Inst. 1989, 67, 57, pp. 57-62

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H	20.	5 051 154	9/91	Bernards et al.			
	21.	5 151 170	9/92	Montgomery et al.			
	22.	5 266 212	11/93	Szotek			
	23.	5 328 589	7/94	Martin			
	24.	5 403 465	4/95	Apperson et al.			
	25.	5 630 950	5/97	Cangelosi			
V	26.	5 730 854	3/98	Martin			
	27.	5 750 018	5/98	Brasch			

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							YES

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

H	28.	"Effects of Polyethylene Glycol on the Electrochemical Characteristics of Copper Cathodes in an Acid Copper Medium", J.D. Reid and A.P. David, PLATING AND SURFACE FINISHING, January 87, pp. 66-70
V	29.	"Damascene Copper Electroplating for Chip Interconnections", by P.C. Andricacos, C. Uzoh, J. O. Dukovic, J. Horkans, H. Deligianni, IBM J. RES. DEVELOP., Vol. 42, No. 5, September 1998
V	30.	"Additive Components: Overall Adsorption Behavior", presented by J. Reid, Novellus Systems, UC Berkeley Extension, June 8-10, 1998

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